

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

- 1 1. (Currently Amended) An electronic warfare (EW) cross-eye
2 system, the system comprising:
3 a receiver for receiving a radar signal; and
4 a polarimeter-based subsystem ~~including comprising at least one a~~
5 receive polarimeter for measuring the received radar signal or and a transmit
6 polarimeter for synthesizing the measured received radar signal for producing a
7 jamming signal for transmission, the jamming signal comprising a pair of inverted
8 amplitude signals that are 180 degrees out of phase with each other.
- 1 2. (Original) The system of claim 1 wherein the receiver
2 comprises at least two antennas, separated from each other, for receiving the radar
3 signal.
- 1 3. (Cancelled)
- 1 4. (Cancelled)
- 1 5. (Currently Amended) The system of claim 3-1 further
2 comprising a processor for use in adjusting (a) the receive polarimeter to measure
3 the received radar signal and (b) the transmit polarimeter for producing the jamming
4 signal.
- 1 6. (Currently Amended) The system of claim 3-1 further
2 comprising a phase adjuster for further adjusting the phase of the jamming signal.
- 1 7. (Currently Amended) Apparatus for producing a jamming
2 signal for transmission, the apparatus comprising:
3 a receive polarimeter for measuring a received radar signal for
4 producing a polarimeter setting representative of the measured received radar signal
5 and for measuring a phase delay associated with the apparatus;
6 a transmit polarimeter, set according to the polarimeter setting, for
7 synthesizing the measured received radar signal for producing the jamming signal
8 comprising a pair of inverted amplitude signals that are 180 degrees out of phase
9 with each other; and

10 a phase adjuster for adjusting the phase of the jamming signal before
11 transmission to compensate for the measured phase delay; and

12 a processor for controlling the receive polarimeter, the transmit
13 polarimeter and the phase adjuster.

1 8. (Cancelled)

1 9. (Currently Amended) A vehicle comprising:

2 at least a pair of antennas disposed on the vehicle and separated apart
3 from each other for providing portions of a received radar signal;

4 a receive polarimeter for measuring phase and amplitude relationships
5 between the portions of the received radar signal; ~~and~~

6 a transmit polarimeter for producing a jamming signal based upon the
7 measured phase and amplitude relationships, the jamming signal comprising a pair
8 of inverted amplitude signals that are 180 degrees out of phase with each other; and

9 a processor for use in adjusting (a) the receive polarimeter to measure
10 the phase and amplitude relationships and (b) the transmit polarimeter for producing
11 the jamming signal.

1 10. (Cancelled)

1 11. (Cancelled)

1 12. (Original) The vehicle of claim 9 further comprising a phase
2 adjuster for further adjusting the phase of the jamming signal before transmission.

1 13. (Original) The vehicle of claim 9, wherein the vehicle is an
2 airplane comprising a pair of wings and the antennas are placed on different wings of
3 the pair.

1 14. (Currently Amended) A method for use in jamming a radar
2 signal, the method comprising the steps of:

3 receiving the radar signal;

4 measuring the received radar signal with a receive polarimeter;

5 synthesizing the measured received radar signal with a transmit
6 polarimeter to produce a jamming signal comprising a pair of inverted amplitude
7 signals that are 180 degrees out of phase with each other; and

8 transmitting the jamming signal.

1 15. (Original) The method of claim 14 wherein the receive
2 polarimeter comprises receive phase parameter ports and a difference port, and the
3 measuring step comprises the steps of:
4 varying parameter values applied to the receive phase parameter ports
5 until a null signal is detected on the difference port; and
6 storing the parameter values associated with detection of the null
7 signal.

1 16. (Original) The method of claim 15 wherein the transmit
2 polarimeter comprises transmit phase parameter ports and a difference port, and the
3 synthesizing step comprises the steps of:
4 setting the transmit phase parameter ports to the stored parameter
5 values; and
6 generating a jamming signal from the transmit polarimeter by
7 application of a source signal to the difference port of the transmit polarimeter.

1 17. (Original) The method of claim 15 wherein the receive
2 polarimeter also comprises a sum port and the synthesizing step comprises the steps
3 of:
4 adding a phase delay to the jamming signal before transmission
5 thereof:
6 wherein the phase delay is iteratively determined by detecting when a
7 null condition occurs on the sum port.

1 18. (Currently Amended) The method of claim 15 wherein the receive
2 polarimeter also comprises a sum port and the jamming signal comprises a pair of inverted
3 amplitude signals, and wherein the synthesizing step comprises the steps of:
4 testing the pair of inverted amplitude signals for the occurrence of a null
5 condition on the sum port; and
6 if the null condition has not occurred, iteratively adding a phase delay to at
7 least one of the pair of inverted amplitude signals until the occurrence of the null condition.